

APPENDICES

Appendix A. FNSI

Appendix B. Cooperative Agreement for Management of Army Lands in Alaska

Appendix C. Other Cooperative Agreements

Appendix D. Management Action Plans

Appendix E. Fort Richardson Vascular Flora

Appendix F. Fort Richardson Fauna

Appendix G. Applicable Federal Laws, Regulations, Executive Orders, Directives, and Policies

Appendix A. FNSI

FINDING OF NO SIGNIFICANT IMPACT FOR IMPLEMENTATION OF AN INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN FORT RICHARDSON, ALASKA

September 2001

The United States Army Alaska (USARAK) proposes to fully implement an Integrated Natural Resource Management Plan (INRMP) at Fort Richardson during 2002-2006 to manage natural resources, support the military mission, provide outdoor recreation opportunities and comply with various environmental laws. Implementation will include ongoing operations over the five-year period using both in-house and external personnel. The primary focus of the program will be to survey natural resources and implement programs to conserve and manage them in a proactive manner in compliance with environmental laws and regulations.

CEQ regulations suggest NEPA documents be combined with other agency documents to reduce duplication and paperwork (40 CFR 1506.4) so that agencies can focus on the real purpose of the NEPA analysis, which is making better decisions. In an effort to follow Army guidelines recommending concurrent preparation of the INRMP and its associated NEPA analysis, USARAK has prepared a single document. The resulting "planning assessment" includes a comprehensive description, analysis, and evaluation of all environmental components at Fort Richardson in the form of an Environmental Assessment (EA).

The EA addresses two alternatives - the preferred alternative and the no action alternative. Other management alternatives were considered during the screening process, but eliminated because they were economically infeasible, ecologically unsound, or incompatible with the requirements of the military mission. Chapters 3-7 of the INRMP contain descriptions of the methods used to develop management measures for each resource area and the rationale for why certain management measures were selected. This approach supports Army guidance for concurrent preparation and integration of the INRMP and NEPA documentation.

Preferred Alternative - Implement the INRMP for Fort Richardson, Alaska over the 2002-2006 Planning Period. Implementation of this proposal would meet the Army's need to fulfill natural resource management goals, objectives, and policy on military lands in Alaska and to guide natural resource managers in decision-making regarding management of military land and proposed management projects concurrent with the military mission. The proposed action involves the implementation of the management objectives listed in chapters 3-7 for each resource at Fort Richardson. The five-year planning period (2002-2006) allows for natural resources to be adaptively managed over time. Thus, projects and management schemes are structured to support this timeframe.

The Fort Richardson INRMP is a "living" document that focuses on a five-year planning period based on past and present actions. Short-term management practices included in the plan have been developed without compromising long-range goals and objectives. Because the plan will be modified over time, additional environmental analyses may be required as new management measures are developed over the long-term (i.e., beyond five years).

Current Management / No Action Alternative - Do Not Implement the INRMP for Fort Richardson, Alaska. Under the No Action alternative, the management objectives set forth in the INRMP would not be implemented. Current management objectives would remain in effect and are described for each resource in chapters 3-7. The existing condition of the human environment at Fort Richardson would continue as the status quo under the No Action alternative. This state is defined as those conditions described in chapter 2, *Affected Environment* without implementation of the proposed action objectives listed in chapters 3-7. Development and consideration of a No Action alternative is required by CEQ regulation (40 CFR 1502.14(d)) and serves as a benchmark against which proposed federal actions can be evaluated.

The 2002-2006 INRMP (the Preferred Alternative) is an update of the current 1998-2002 Fort Richardson INRMP. Many of the proposed projects in the current plan have been funded and implemented on Fort Richardson. However, some projects have not been completed. Funds have been obligated towards completion of the following projects and are considered part of the current management (the No Action Alternative):

- Staff salaries, equipment, and supplies
- Cultural resources studies
- LCTA Program
- Forest Management Plan and Commercial Feasibility Study
- Range improvement activities
- Conduct moose and caribou censuses
- Develop Cross Cultural Communication Steering Committee
- Develop recreational computerized check-in/check-out system

Other Alternatives Considered and Eliminated. Additional alternatives considered for the management of Fort Richardson's natural resources are described and evaluated within the sections of chapters 3-7 that discuss the management of each resource. During the development of these various management alternatives, it was determined that an infinite number of management schemes are possible. Consistent with the intent of NEPA, this process focused on considering a reasonable range of resource-specific management alternatives and, from those, developing a plan that could be implemented, as a whole, in the foreseeable future. Management alternatives that were considered during the screening process, but not analyzed in detail, are discussed within chapters 3-7 as is the rationale for their non-selection. Application of this screening process in developing the proposed action (implementation of the management options listed in chapters 3-7 of this INRMP) eliminated the need to define and evaluate hypothetical alternatives to plan implementation. As a result, the EA (which is an integral part of this document) formally addresses only two alternatives, the proposed action and the no action alternative (current management).

Anticipated Environmental Effects. The purpose for natural resources management is to have a positive effect on the environment. Based on the analysis in this chapter, it is concluded that overall, the proposed natural resources management will produce a positive effect on the environment. However, there are some short term negative impacts while projects are being conducted, but these will not significantly affect the environment. These same projects that may produce short-term impacts will result in long-term positive impacts.

Compared to the no action alternative, environmental conditions at Fort Richardson would improve as a result of implementing the proposed INRMP. These proposed natural resource projects are designed to have a positive benefit to the environment, as well as to mitigate the intensive use of both the military and recreational users. Overall, the cumulative impact of these proposed actions would be positive. Therefore, the proposed action is the preferred alternative.

Facts and Conclusions Leading to the FNSI. The proposed action to implement the INRMP for Fort Richardson was analyzed by comparing potential environmental consequences against existing conditions. Findings indicate that, under the preferred alternative, potential consequences would result in either no significant adverse effects or only beneficial effects on each resource area (see Chapter 9.2). Proceeding with the preferred alternative would not significantly or adversely impact the affected environment. Additionally, no significant cumulative effects would be expected.

Based on the analyses in the EA for implementation of the INRMP at Fort Richardson, Alaska, it is USARAK's decision to select the preferred alternative as described in the EA. USARAK also concluded that a Finding of No Significant Impact (FNSI) is warranted because the action would have no significant environmental or socioeconomic effects. Because no significant effects would result from implementation of the proposed action, preparation of an EIS is not required, and preparation of a Finding of No Significant Impact (FNSI) is appropriate.

Comments will be received until 30 days following release of the FNSI. Comments received will be reviewed and relevant issues will be addressed and incorporated into a revised EA. If no comments are received during the public comment period, the original EA will become the final EA document. Comments on this action should be directed to the following address:

**Directorate of Public Works
730 Quartermaster Road
ATTN: APVR-RPW-EV (G. Larsen)
Fort Richardson, AK 99505-6500
Phone: (907) 384-3074
Fax: (907) 384-3047
E-mail: garylarsen@richardson.army.mil**

Fredrick J. Lehman
Colonel, U.S. Army
Garrison Command

Appendix B.

Specific Items of Cooperation Between the Alaska Department of Fish and Game, Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Army Alaska

1. PURPOSE

This document lists specific of cooperation between the Alaska Department of Fish and Game (ADF&G), U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), and U.S. Army Alaska (USARAK) for cooperative implementation of the US Army Alaska Integrated Natural Resources Management Plan, the Fort Greely and Donnelly Training Area Resource Management Plan, the Fort Wainwright Yukon Training Area Resource Management Plan, and establishes cooperative efforts for the management of public lands withdrawn for military use in accordance with the Military Lands Withdrawal Act of 2001 (Public Law 106-65). This document serves as the cooperative agreement for the Sikes Act required INRMP as well as the MOU required by PL 106-65 and FLPMA.

2. AUTHORITY

- A. Military Lands Withdrawal Act of 2001 (P.L. 106-65)
- B. Federal Land Policy and Management Act of 1976 (P.L. 94-579), as amended
- C. Sikes Act (P.L. 86-797), as amended
- D. National Environmental Policy Act of 1969 (P.L. 91-190), as amended (NEPA)

In accordance with the authority in Title 10, U.S. Code, Section 2671, and Title 16, U.S. Code, Section 670, the Department of Defense, the Department of Interior, and the State of Alaska, through their duly designated representatives, whose signatures appear on the Fort Greely and Donnelly Training Area Integrated Natural Resources Management Plan, approve the Integrated Natural Resources Management Plan and the following items of cooperation between the four agencies.

3. OBJECTIVE

To improve communication and coordination and ensure cooperation between all four agencies.

The Military Lands Withdrawal Act of 2001 authorized the re-withdrawal of certain public lands in Alaska for continued military use as parts of Fort Greely and Fort Wainwright. The act required the Secretary of the Interior to manage the lands pursuant to the Federal Land Policy and Management Act of 1976 and other applicable laws. Pursuant to the act, BLM and USARAK developed Resource Management Plans (RMP)s for the management of natural resources on the withdrawn lands and enter into this Memorandum of Understanding (MOU) to implement those plans.

The Sikes Act Improvement Act (1998) requires the completion of Integrated Natural Resources Management Plans for all military lands, including withdrawn lands. As required by the Sikes Act, the following agreements are made:

- (1) This US Army Alaska Integrated Natural Resources Management Plan is the planning document required by the Sikes Act, as amended.

(2) This plan will be reviewed by the ADF&G, BLM, USFWS, and USARAK regularly, but not less often than every five years.

Through these items of specific cooperation, USARAK and BLM will fulfill the mandate of the Military Lands Withdrawal Act of 2001 to implement plans for the two withdrawals. This agreement clearly defines the roles and responsibilities of the two agencies to efficiently and effectively manage the nonmilitary uses and natural resources of these withdrawn lands.

These items of specific agreement outline the procedures with which ADF&G, USFWS, BLM, and USARAK will implement the plans. This management is to be consistent with applicable law, subject to such conditions and restrictions necessary to permit the military use of such lands, and provide for proper management and protection of the resources and values of such lands, including protection of wildlife and wildlife habitat, recreation, and fire prevention and suppression of fires.

4. DEFINITIONS

4.1 Joint Stewardship and Joint Management

Joint management refers to Congressionally-directed shared responsibility by the Bureau of Land Management (BLM) and that Department of Defense (DOD) for organizing, controlling, and supervising activities on certain withdrawn federal lands.

Joint stewardship refers to the working relationship entered into between USARAK, ADF&G, USFWS, and BLM for the care of withdrawn federal lands in Alaska and associated resources used by USARAK for military mission requirements.

The majority of the land currently used by USARAK is on long-term withdrawal from public domain lands originally assigned to the Department of the Interior's (DOI) Bureau of Land Management (BLM). Provisions for management of these lands are generally specified in each of the Public Laws, Public Land Orders, Executive Orders, and other enabling documents.

Whenever the military uses a tract of public land originally assigned to another agency, it incurs legal and moral responsibilities for the stewardship of the land and its resources. Residual responsibility for USARAK withdrawn lands remain with BLM, who retains interest in the stewardship of the transferred parcel, even though the land is under DOD's long-term management.

The reason USARAK land is withdrawn from other public use to the military is to enhance military readiness in the interest of national defense. If the land were intended to be managed primarily for multiple uses, it would not be managed by a military service. Under USARAK management, land is used primarily for national security purposes (e.g., training and testing), but will also be managed to accommodate additional uses as long as they do not impinge on the primary military readiness mission.

4.2 Specific Lands Withdrawn for Military Use in Alaska

Lands withdrawn for military use in Alaska referenced in this agreement include the following:

Fort Greely and Donnelly Training Area
Donnelly East and West training areas (PL 106-65)
Fort Greely Main Post

Gerstle River Training Area
Black Rapids Training Site
Whistler Creek Training Site

Fort Richardson
North Post
South Post
Eklutna Glacier

Haines
Tok
Seward Recreation Camp

Fort Wainwright
Fort Wainwright Main Post
Tanana Flats Training Area
Yukon Training Area (PL106-65)

4.3 Military Use vs. Nonmilitary Use

4.3.1 Nonmilitary Activities

Nonmilitary use: All human use of the land or natural resources of these withdrawn lands that is not connected in any way to the military mission.

1. All nonmilitary use of these withdrawn lands shall be subject to such conditions and restrictions as may be necessary to permit the continued and future military use of such lands. Any use authorized by BLM will require USARAK concurrence so that military use of the land is not restricted.

2. BLM or the proponent shall prepare environmental documentation for nonmilitary activities on these withdrawn lands following a preliminary consultation with USARAK. BLM shall coordinate all NEPA documents, formal consultations, and permits with USARAK, providing opportunity for comments, during each stage of the authorization process. USARAK shall comment in writing. BLM will provide USARAK copies of all final NEPA and authorization documents.

3. BLM may issue use authorizations or resource sales only with the concurrence of USARAK. USARAK will grant or deny concurrence in writing. USARAK will respond to a request for project review and concurrence within 30 calendar days, except that extensions of time may be requested for cause. Generally, actions which can be approved locally will be returned within the allotted time; however, for any actions which require approval at higher headquarters (outside Alaska), an additional 30-60 days will be required. USARAK may attach stipulations designed to protect military present and future use of the land to any concurrence for nonmilitary use. Such stipulations, however, shall not be used as a de facto means of denying nonmilitary use. USARAK's concurrence may be withdrawn for cause.

4.3.2 Military Activities

Military use: Any use of the land or natural resources connected in some way to the present or future military mission. Since implementation of all projects detailed in the Sikes Act mandated INRMP support the military mission, all projects and uses contained in the USARAK INRMP are by definition classified as a military use.

1. USARAK or the proponent of military activities shall prepare environmental documentation for military activities on these withdrawn lands in accordance with 32 CFR 651. This environmental documentation should address impacts of the proposed military activities on the decisions and resources addressed in the RMP and the associated activity plans. USARAK shall coordinate all NEPA documents, formal consultations, and permits with BLM, providing opportunity for comments, as appropriate. BLM shall comment in writing. USARAK will provide BLM copies of all final NEPA and authorization documents

2. USARAK shall promptly notify BLM in the event that these withdrawn lands will be used for defense-related purposes other than those specified in Section 1 of the Military Lands Withdrawal Act of 1986 (Sec. 3(t)). Such notification must indicate the additional uses involved, the proposed duration of such uses and any proposed restrictions to be imposed on otherwise permitted non military uses of the withdrawn lands.

5. MUTUAL AGREEMENT

USARAK and BLM agree to the following measures to coordinate implementation and resolve disputes regarding this MOU and the RMPs:

1. The primary USARAK point of contact will be the local natural resources manager (currently located within the Directorate of Public Works, Environmental Resources Department). The natural resources manager will coordinate actions through the appropriate military chain of command for approval or concurrence.

2. The primary BLM point of contact will be the Steese/White Mountains District Resource Division Supervisor. The resource division supervisor will coordinate actions through the appropriate BLM chain of command for approval or concurrence.

3. The second level for project coordination and dispute resolution shall be:

- a. USARAK --Director of Public Works, Fort Richardson, Alaska.
- b. BLM--District Manager, Steese/White Mountains District.

4. The above named points of contact may be changed by giving written notification.

5. The third level of project coordination and dispute resolution shall be:

- a. USARAK--USARAK Commander
- b. BLM-Alaska State Director

6. USARAK and BLM may enter into supplemental agreements where necessary to specify interrelationships in detail or for specific projects or activities. Any supplemental agreement will be in accordance with this MOU and the Military Lands Withdrawal Act of 1986.

7. USARAK and BLM will review this MOU at least every 3 years to determine its adequacy, effectiveness, and need for updating.

8. The terms of this MOU may be renegotiated at any time at the request of either signatory, following 30 days notice to the other party.

9. Either party may propose changes to this MOU during its term. Such changes will be in the form of an amendment and will become effective upon signature by both parties. Such amendments may be signed by the signatory or that person's successor or designee.

10. This MOU will expire November 6, 2001, unless cancelled, extended, or renewed.

11. This MOU will become effective upon signature by the BLM and USARAK.

6. RESPONSIBILITIES

6.1 Access

1. The military's need for secure and safe training areas dictates that USARAK has responsibility for controlling access to these withdrawn land. In the exercise of these responsibilities and in conformance with decisions reached in the resource management plans, USARAK:

- will maintain signs at all major road and trail entrances to the withdrawn lands identifying the property and the requirements for entering,
- will maintain signs warning the public and prevent access into impact areas and other restricted areas,
- may allow specific nonmilitary uses and users into closed areas as appropriate,
- will close potentially dangerous lands in addition to those described in the RMPs, if any are created or discovered,
- may close a buffer zone around impact areas during times of use,
- may close any area of the withdrawals in accordance with Sec. 3(b), PL 99-606,
- may restrict vehicle use more than described in the resource management plans, if required to preclude conflicts with the military's mission, and
- will remediate the two Nike battery sites in the Yukon Maneuver Area as funding is made available to eliminate potential human health risks.

2. BLM, in coordination with USARAK, may impose greater restrictions on nonmilitary vehicle use than described in the RMPs as necessary to protect the environment.

3. BLM and USARAK, through mutual consent, may lift restrictions on vehicle use described in the RMPs.

4. All trespass constitutes an infringement upon the military mission and is subject to BLM and USARAK law enforcement activities. In cases in which the action of the trespasser, if otherwise undertaken pursuant to valid permit or other authorization, would require the payment of rentals, fees, or appraised value, USARAK will coordinate law enforcement activities with BLM. Recovery of damages or lost revenue shall be carried out by BLM, but shall in no way inhibit or delay USARAK's abatement activity .

6.2 Ecosystem Management

Ecosystem management on Fort Greely and Donnelly Training Area is the primary responsibility of USARAK. Coordinating the many land uses on post is the responsibility of DPTSM Range Control, while management of natural resources and recreation is the responsibility of DPW. Most commercial uses and all leases, easements and rights-of-way must be permitted by BLM, with concurrence by USARAK. Both USFWS and ADF&G play integral roles in ecosystem management both on the installation and in regional ecosystem management efforts.

6.3 Integrated Training Area Management (ITAM)

ITAM is the primary responsibility of USARAK. The ITAM program links the efforts of the DPTSM, which has responsibility for installation training land management, with the efforts of the DPW and the natural and cultural resources/environmental staffs to support the overall objectives of sustaining a well-trained and equipped combat force.

6.4 Watershed Management

Watershed management on Fort Greely and Donnelly Training Area is the responsibility of USARAK. Within USARAK, DPW Environmental Department has primary responsibility to conduct watershed management. DPTSM also shares responsibilities to implement soil and water quality management through the LRAM program and through best management practices of the impact areas. US Army Corps of Engineers, under the Clean Water Act, is the primary regulator. The Environmental Protection Agency also has regulatory responsibility under the Safe Drinking Water Act. ADEC also has responsibility for regulating soil and water quality.

USARAK recognizes that the release of contaminants into the environment and response actions to clean up those contaminants may result in adverse impacts to natural resources addressed in this INRMP. The Installation Restoration Program (IRP) is responsible for identifying such releases, considering risks and assessing impacts to the environment (including impacts to endangered species, migratory birds and biotic communities), and developing and selecting response actions when unacceptable risk to ecological receptors from the release is likely. The installation's natural resources management staff, in coordination with the USFWS and Alaska Department of Fish and Game, will identify potential impacts to natural resources caused by the release of contaminants and communicate those impacts to the IRP. Installation natural resources staff will also participate, as appropriate, in the IRP decision-making process to communicate natural resources issues, reviews and comments on documents (e.g. Remedial Investigation, Ecological Risk Assessment), and ensure that response actions, to the maximum extent practicable, are undertaken in a manner consistent with goals and objectives set forth in the INRMP.

The IRP will notify installation natural resources management staff of contaminant releases into the environment and invite such staff to participate in the decision-making process to ensure that impacts to natural resources are identified, considered and addressed in the response process.

6.5 Minerals Management

Mineral resources on public lands withdrawn for military purposes in Alaska are managed by BLM under federal regulations found in 45 CFR 3000. Sale and/or free use of mineral materials require NEPA review and USARAK concurrence. Unauthorized use of mineral materials is considered trespass and will be resolved jointly by the military and the BLM.

6.6 Wetlands Management

Range Control, a component of the Directorate of Plans, Training, Security and Mobilization (DPTSM), is the primary authority for regulating military land use and various stipulations of the permits. Range Control's authority to schedule training facilities and conduct range inspections initiates from the Installation Commander and is explained in the USARAK Range Regulation 350-2, which details acceptable conduct during training exercises in the field to reduce negative environmental impacts.

The US Army Corps of Engineers is the authority for insuring compliance with the requirements of Section 404 of the Clean Water Act, which regulates use of wetland areas. As such, USACE will conduct random follow-up inspections on a representative sample of disturbed wetlands to ensure compliance with the five-year general permit and other permits as issued.

6.7 Forestry

Under Public Law 99-606, BLM retains vegetative and mineral rights for East and West training areas. Any vegetation manipulation by USARAK must be approved by BLM. BLM timber management practices, contract stipulations, and the mandates of the state's forest practices regulations would govern the sale of timber from these lands.

This project will be completed in cooperation with BLM, which holds timber rights under Public Law 106-65. Forests on withdrawals fall under BLM's restricted category for management; that is, management of the withdrawal is primarily for the military, but timber harvests are permitted. Members of the public may approach BLM for a permit to purchase timber on withdrawn lands, but each timber sale must be approved by the military.

Timber removal and other forest management practices will be coordinated with Range Control to ensure minimal disruption of military training. Scheduling usually will be done three to six months in advance of activities. Appropriate NEPA documentation will be completed prior to implementation of timber stand improvement projects.

No land or forest products from land on Fort Greely and Donnelly Training Area will be sold under Section 2665 (a) or (b), Title 10 USC, and no land will be leased on Fort Greely and Donnelly Training Area under Section 2667 of Title 10 unless the effects of such sales or leases are compatible with the purposes of the Integrated Natural Resources Management Plan.

6.8 Fire Management

The AFS, a BLM agency, has primary fire suppression responsibility for wildfires on lands in central and northern Alaska. The Army has an Inter-Service Support Agreement with BLM whereby AFS is provided facilities on Fort Wainwright in exchange for fire protection on Army lands.

The Fort Greely and Donnelly Training Area Fire Department is responsible for fire suppression on Main Post, and AFS has primary responsibility for the rest of Fort Greely and Donnelly Training Area. The Fort Greely and Donnelly Training Area Fire Department monitors fire danger parameters; when certain levels of risk are reached, restrictions on military activities are imposed. The Fire Department collects weather readings during fire season. Data are used to calculate Fine Fuel Moisture Content (FFMC), which is an indication of wildfire danger. The FFMC is provided to Range Control, which restricts types of munitions and pyrotechnics allowed as fire danger increases.

6.9 Fish and Wildlife

ADF&G has the primary responsibility for managing fish and wildlife game populations. ADF&G sets population goals and carries out stocking on Fort Greely and Donnelly Training Area. USFWS is primarily responsible for managing non game populations of fish and wildlife. USARAK is responsible for working together with these two agencies to conduct habitat management on Fort Greely and Donnelly Training Area. Routine grounds maintenance on Fort Greely and Donnelly Training Area is the responsibility of Roads and Grounds Maintenance, DPW.

Persons hunting, trapping, or fishing the lands or waters of Fort Greely and Donnelly Training Area shall be required to obtain special hunting, trapping, and fishing permits unless exempt by USARAK regulations. At present, there is no cost for these permits, but USARAK reserves the right to charge for these permits in the future. Any funds derived from the sale of these permits would be used exclusively for implementation of the Fort Greely and Donnelly Training Area Integrated Natural Resources Management Plan in accordance with Army regulations and the Sikes Act. Fees charged would be established by the installation in accordance with Army regulations.

Persons hunting, trapping, or fishing the lands of Fort Greely and Donnelly Training Area must purchase state licenses, tags, and stamps as required by the ADF&G, unless exempt by ADF&G regulations. The ADF&G agrees that military personnel on active duty and permanently stationed in Alaska may purchase special fishing and small game licenses at resident prices. The ADF&G also agrees that active duty military personnel, not including dependents, may hunt big game without licenses or tags on military lands open to hunting providing they follow ADF&G hunting regulations. Nonresident military hunters (lived in Alaska less than 12 months) stationed in Alaska must purchase nonresident hunting licenses and appropriate big game tags to hunt big game, but the tags will cost one-half the normal nonresident price.

A federal waterfowl stamp is required for hunting waterfowl as prescribed by federal laws.

All hunting, fishing, and trapping on Fort Greely and Donnelly Training Area will be in accordance with federal and state fish and game laws.

Representatives of ADF&G, BLM, and USFWS will be admitted to the installation at reasonable times, subject to requirements of military necessity and security. Such personnel may use U.S. Army transportation on a nonreimbursable basis, to include aircraft, for wildlife-related functions on Fort Greely and Donnelly Training Area, provided such transportation is available without detriment to the military mission.

USARAK shall furnish assistance and facilities to ADF&G, BLM, and/or USFWS for mutually agreed upon natural resources research projects.

No exotic species of fish or wildlife will be introduced on Fort Greely and Donnelly Training Area lands without prior written approval of the Army, ADF&G, BLM and USFWS.

The state of Alaska shall establish season and bag limits for harvest of game species on Fort Greely and Donnelly Training Area. USARAK may make special requests for such regulations according to procedures established by the ADF&G.

Hunting, trapping, and fishing on Fort Greely and Donnelly Training Area will be authorized and controlled by the Installation Commander in accordance with locally published installation regulations promulgated in compliance with applicable federal and state laws, Army regulations, military requirements, and the Integrated Natural Resources Management Plan.

Public access for hunting, trapping, and fishing is approved under a system of controls established by USARAK in cooperation with ADF&G. Civilians will be considered on an equal basis with military and Army civilian employees for permits and access to hunting and fishing areas. Should there be a need for quotas on the number of hunters permitted on a daily or seasonal basis for reasons of safety, such quotas will not be instituted prior to consultation with ADF&G. Hunting, trapping, and fishing will be allowed only on those areas where there is no conflict with military training activities and no unreasonable safety hazard to participants, military personnel and dependents, or Army civilian employees. Certain areas will be closed to hunting and fishing, including, but not limited to, impact areas containing unexploded

ordnance and training areas with sensitive electronic equipment. Such areas will be marked as closed on installation hunting maps. Training areas will be open daily when not scheduled for military training activities. Installation maps indicating open and closed areas will be posted and updated daily, or as required, by USARAK.

Fort Greely and Donnelly Training Area has concurrent jurisdiction with regard to law enforcement. In areas of concurrent jurisdiction, Alaska laws may be enforced by either federal or state commissioned enforcement personnel. Enforcement will be a joint responsibility of USARAK, Alaska State Troopers, and the USFWS.

USARAK agrees to cooperate with the USFWS and ADF&G for management of any threatened or endangered species residing on the installation. Such efforts will be in compliance with federal and state laws and applicable Army regulations.

USARAK agrees that persons using withdrawn lands for commercial purposes must have BLM permits in addition to Army approval.

ADF&G agrees to continue to stock Fort Greely and Donnelly Training Area lakes. ADF&G will determine the number and species of fish to be stocked based on angler use trends and fish availability.

6.10 Endangered Species

US Fish and Wildlife Service is responsible for administering the Endangered Species Act. USARAK is responsible for continuing to identify and delineate any species that are listed as threatened or endangered. USARAK is responsible for conducting Section 7 consultation with USFWS for any actions that may affect endangered or threatened species. If any listed species are found to occur on USARAK lands, or a species occurring on USARAK is listed, USARAK will undertake consultation with USFWS and will prepare an endangered species management plan and will update the INRMP.

6.11 Pest Management

Pest management is the responsibility of DPW, specifically a Certified Pest Controller. Other organizations involved include PMO game wardens and DPW Environmental Resources Department. The Pest Management Coordinator for USARAK is within Conservation Division, DPW, Fort Richardson. This Coordinator is not involved in routine pest management operations, but serves as a technical advisor to the program.

Noxious animal control is a shared responsibility at Fort Greely and Donnelly Training Area. In general, the Fort Wainwright Pest Control Branch, DPW, and the Provost Marshal work within the cantonment area. The Provost Marshal, assisted by ADF&G and the Alaska State Troopers, handles problems with game animals. Animal Damage Control (ADC), U.S. Department of Agriculture, has skills that may be useful in controlling noxious animals.

6.12 Education and Public Outreach

DPW holds the responsibility for conducting the education, awareness, and public outreach program. Public Affairs Office is primarily responsible for interacting with the professional news media. All materials developed by the DPW Conservation Division are required to be reviewed by Public Affairs before they are released in any form to the public.

6.13 Outdoor Recreation

The Environmental Resources Department has responsibility for:

- management of outdoor recreational activities and natural resources.
- coordinated selection and designation of installation outdoor recreation areas.
- coordination of the use of outdoor recreation areas and their maintenance.
- prevention of environmental degradation using limitations or closures on the use of recreational areas, in coordination with the Directorate of Community Activities.

The Community Recreation Division is responsible for:

- the movement of persons, special events, and organizational elements of outdoor recreation.
- determining the need for various outdoor recreation activities (exclusive of those involving consumptive use of wildlife).
- requesting the designation of recommended areas for outdoor recreation use.
- administering the recreation aspects of approved programs.
- issuing use permits to individuals and groups when their requests for recreation access meet policy requirements (and sending copies of such licenses to the Environmental Resources Department).

DPTSM is responsible for removing trespass structures.

6.14 Conservation Enforcement

The Arctic Law Enforcement Command (LEC) Provost Marshal, is the USARAK game warden. The LEC Commander is responsible for coordination and supervision of fish and wildlife law enforcement on all Army lands in Alaska. The Provost Marshal at Fort Wainwright appoints Military Police personnel to serve as game wardens. This system of fish and wildlife enforcement has been in place since establishment of the installation. The Provost Marshal supervises wildlife enforcement officers. They also coordinate and receive technical direction from the Chief of Natural Resources in accordance with Army Regulation 200-3.

Fort Greely and Donnelly Training Area's fish and wildlife enforcement has concurrent jurisdiction. It can be performed by officers with federal or state commissions. Enforcement is a joint responsibility of USARAK and Alaska State Troopers. The federal magistrate adjudicates citations written by USARAK officers, unless they are military personnel who violate only post regulations. In these cases, military commanders adjudicate citations. Trooper-issued citations use the state system for adjudication.

DPW, MWR, LEC, BLM, USFWS, ADF&G all have responsibilities here.

6.15 Cultural Resources

USARAK DPW is responsible for cultural resources management on Fort Greely and Donnelly Training Area. BLM and USARAK are jointly responsible for conducting Section 110 surveys of archaeological resources in the training areas. USARAK is responsible for conducting Section 106, NHPA actions for undertakings that result from natural resources management and military training.

6.16 NEPA

The ERD has primary responsibility for NEPA at Fort Greely and Donnelly Training Area for actions proposed by the military. Natural resources personnel assist with compliance and documentation. Army

Regulation 200-2 (*Environmental Effects of Army Actions*) requires proponents to prepare and fund NEPA documentation. At Fort Greely and Donnelly Training Area, proponents sometimes prepare NEPA documentation, which is ideal since it involves project managers (or military unit leaders) in decisions involved with NEPA. However, for most projects, NEPA documents are prepared by ERD.

BLM has primary responsibility for NEPA at Fort Greely and Donnelly Training Area for actions proposed by the public. BLM is responsible for the NEPA process and all NEPA documentation for any actions not proposed by the military.

6.17 Decision Support Systems

GIS is the joint responsibility of USARAK DPW Environmental and DPTSM Range Control. GIS is funded through the conservation and ITAM programs. USARAK DPTSM Range Control has the responsibility for RFMSS. USARAK DPW is responsible for IFS.

6.18 RPMP

Real property management and master planning are the responsibility of the Assistant Chief of Staff for Installation Management (ACSIM), with the DPW having the responsibility at the installation level. The DEP and USAEC are part of the OACSIM. The training community supports property management and planning both through ITAM and the RTLP, i.e., AR 350-4 and AR 210-21, respectively.

Real property and the Corps of Engineers have responsibility for easements and leases. However, on withdrawn lands at Fort Greely and Donnelly Training Area, BLM is responsible for granting easements and leases, with military concurrence, to agencies, organizations or individuals requesting something.

6.19 RTLP

At Fort Greely and Donnelly Training Area, the DPTSM is the RTLP proponent. Range Control is responsible for implementation of the RTLP.

7. FUNDING

When USARAK chooses the option to directly transfer funds to ADF&G, USFWS, or BLM, USARAK agrees:

- (1) To develop a scope of work for each project to be accomplished under this agreement.
- (2) To issue a delivery order or MIPR, executed by a USARAK contracting officer or budget officer, obligating funds to accomplish the agreed-upon scope of work at an agreed-upon price.
- (3) To reimburse ADF&G, USFWS or BLM for any supplies, equipment, travel and personnel services (including salary, benefits, sick and annual leave accrual); direct administrative cost for project procurement; logistical arrangements (travel, housing, utilities, vehicles, conferences, workshops and project reviews); human resources (job searches, processing of employment forms, project-specific personnel issues, time sheets, hourly employees and leave reports); project reports (editing, graphics, publication); program management; and overhead cost not to exceed 10%, consistent with OMB Circular A-21.

ADF&G, USFWS and BLM agree:

(1) To provide technical assistance through employees or qualified agents who have the expertise necessary to carry out the purpose of this agreement.

(2) To enter into consulting agreements or subcontracts with other qualified agents who have expertise to assist in the execution of this agreement.

(3) To purchase equipment, software, and materials and provide maintenance and repair of equipment that is required to carry out the purpose of this agreement. The equipment purchased under this agreement will be used to satisfy the objectives of this agreement. USARAK will reimburse ADF&G, USFWS or BLM for the purchase price of required equipment and materials and the cost of maintenance and repair of said equipment necessary for project completion. Equipment and material over \$1000 purchased under this agreement shall become property of USARAK at the completion of work undertaken pursuant to this agreement.

(4) To bill USARAK quarterly on a reimbursable basis for costs as provided under the terms of this agreement and individual delivery order or MIPR. Billing statements should be addressed to:

Directorate of Public Works
730 Quartermaster Road
ATTN: APVR-RPW-EV (Johnson)
Fort Greely and Donnelly Training Area, Alaska 99505-6500

8. LIMITATIONS

The military mission of Fort Greely and Donnelly Training Area supersedes natural resources management and associated recreational activities and such activities must in all instances be compatible with the military mission. However, where there is conflict between the military mission and provisions of the Endangered Species Act, the Sikes Act, or any other law associated with natural resources conservation, such conflicts will be resolved according to statutory requirements.

9. REQUIRED AGREEMENTS

Nothing contained in this agreement shall modify any rights granted by treaty to any Native Alaskans or Indian tribe or to members thereof.

The possession of a special permit for hunting migratory game birds will not relieve the permittees of the requirements of the Migratory Bird Stamp Act, as amended.

This INRMP is a Federal Facilities Compliance Agreement.

As required by the Sikes Act, the following agreements are made:

(1) This Fort Greely and Donnelly Training Area Integrated Natural Resources Management Plan is the planning document required by the Sikes Act, as amended. This plan contains items required by law. In the event the Sikes Act is amended after this INRMP is signed, this plan will be amended to conform with the new requirements within the Sikes Act if needed.

(2) This plan will be reviewed by the ADF&G, BLM, USFWS, and USARAK regularly, but not less often than every five years.

(3) No land or forest products from land on Fort Greely and Donnelly Training Area will be sold under Section 2665 (a) or (b), Title 10 USC, and no land will be leased on Fort Greely and Donnelly Training Area under Section 2667 of Title 10 unless the effects of such sales or leases are compatible with the purposes of the Integrated Natural Resources Management Plan.

(4) With regard to the implementation and enforcement of the Fort Greely and Donnelly Training Area Integrated Natural Resources Management Plan, neither Office of Management and Budget Circular A-76 nor any successor circular thereto applies to the procurement of services that are necessary for that implementation and enforcement, and priority shall be given to the entering into of contracts for the procurement of such implementation and enforcement services with federal and state agencies having responsibility for the conservation or management of fish or wildlife.

(5) This Integrated Natural Resources Management Plan will become effective upon the date subscribed by the last signature and shall continue in full force for a period of five years or until terminated by written notice to the other parties by any of the parties signing this agreement. This agreement may be amended or revised by agreement between the parties hereto. Action to amend or revise may originate with any of the other participating agencies.

(6) The USARAK, ADF&G, and the USFWS enter into this agreement based on the requirements and opportunities in the Sikes Act, as amended. The three parties are aware that the BLM is also a signatory partner to this Integrated Natural Resources Management Plan.

Appendix C. Other Agreements for Implementation of Natural Resources Management on Army Lands in Alaska

Cooperative Agreement for Fire Suppression on Army Lands in Alaska. The Army has an agreement with BLM – Alaska Fire Service (AFS) whereby AFS is provided facilities on Fort Wainwright in exchange for fire protection on all Army lands in Alaska.

Cooperative Agreement for Natural, Cultural, and Environmental Support. This agreement with the Center for Ecological Management of Military Lands at Colorado State University provides support for natural and cultural resources, as well as environmental management.

Cooperative Agreement for Vegetation Management Support. USARAK has entered into a cooperative agreement with ADNRR, Plant Materials Center (PMC) to conduct revegetation projects and provide plant materials advice.

Cooperative Agreement for Erosion Control and Habitat Management. USARAK has entered into a cooperative agreements with both the Delta Soil and Water Conservation District (DSWCD) and the Palmer Soil and Water Conservation District (PSWCD) for enhancing, rehabilitating, and maintaining USARAK training lands to ensure their continued long-term use and effectiveness. The districts partner with USARAK to conduct LRAM, erosion control, and habitat management projects.

Appendix D. Management Action Plans to Support the INRMP

1. Ecosystem Management Action Plan
2. Habitat Management Action Plan
3. Wetlands Management Action Plan
4. Forest Management Action Plan
5. Special Interest Areas Management Plan
6. Outdoor Recreation Management Action Plan
7. ITAM Action Plan
8. Fire Management Action Plan
9. Soil Resources Management Action Plan
10. Conservation Enforcement Management Action Plan
11. Aerial Monitoring Management Action Plan
12. Landscape Action Plan

USARAK is committed to developing the following plans to support the natural resources management programs described in this INRMP. Development of these plans is addressed within this INRMP, including identification of funding mechanisms and priorities. These plans are summarized here and can be found under separate cover.

1. ECOSYSTEM MANAGEMENT ACTION PLAN

The Ecosystem Management Action Plan will be a comprehensive plan outlining all details for conducting both routine and non-routine wildlife surveys, inventories and monitoring activities on Fort Richardson lands and waters. It will include, but will not be limited to: methodologies, techniques, equipment and personnel requirements, study area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and responsibilities of all partnering agencies and/or groups participating in those activities. Wildlife species or types for consideration within this plan include: moose, bear (brown and black), wolves, wolverine, lynx, coyote, fox, otter, beaver, small mammals, raptors, waterfowl, ptarmigan, grouse (spruce and ruffed), ravens, neotropical migrants, rainbow trout, Dolly Varden, and several species of salmon. This plan will be compatible with the military training mission and complementary to the ITAM program, ensuring both a healthy environment and optimum training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797), Endangered Species Act, AR 200-3, and the Cooperative Agreement for management of fish and wildlife resources on Army lands in Alaska.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

2. HABITAT MANAGEMENT ACTION PLAN

The Habitat Management Action Plan will be a prescriptive plan that directs all wildlife habitat rehabilitation, enhancement, and maintenance activities on Fort Richardson. The comprehensive plan will incorporate all facets of wildlife habitat management including methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. Wildlife species and groups considered within this plan include: moose, bear (brown and black), wolves, wolverine, lynx, coyote, fox, otter, beaver, small mammals, raptors, waterfowl, ptarmigan, grouse (spruce and ruffed), ravens, neotropical migrants, rainbow trout, Dolly Varden, and several species of salmon.

The plan will be compatible with the military training mission and complementary to the ITAM program, ensuring both a healthy environment and optimum training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797), Migratory Bird Treaty Act (16 USC 703-711), Executive Order 12962, Recreational Fishery Resources Conservation Plan, Endangered Species Act, and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

3. WETLAND MANAGEMENT ACTION PLAN

The Wetland Management Action Plan will be a comprehensive plan written to protect, enhance, and maintain the biodiversity of wetlands on Fort Richardson. The plan will classify and prioritize wetland units in terms of size, functions, and values, with priorities assigned to wetland units. It will include, but will not be limited to: methodologies, techniques, equipment and personnel requirements, study area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and responsibilities of all partnering agencies and/or groups participating in those activities. This plan will be compatible with the military training mission and complementary to the ITAM program, ensuring both a healthy environment and optimum training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

4. FOREST MANAGEMENT ACTION PLAN

The Forest Management Action Plan will be a comprehensive plan written to implement a forest management program for Fort Richardson. The plan would provide for the enhancement of forest values, benefitting the Army training mission, and protecting and maintaining the productivity and biodiversity of the forest ecosystems on the installation. It will include, but not be limited to: methodologies, techniques, equipment and personnel requirements, study area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities. This plan will be compatible with the military training mission and the Wildlife Habitat Management Plan, and it will complement the ITAM program, ensuring both a healthy environment and an optimal training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

5. SPECIAL INTEREST AREAS CONSERVATION ACTION PLAN

The Special Interest Areas Conservation Action Plan will address all areas on Fort Richardson that contain unique, rare, unusual, atypical, sensitive, or otherwise special natural resources or environmental conditions that warrant protective or special management practices. Since these areas may vary considerably in their unique or special features, they will be treated individually within the plan. It will include detailed descriptions of each area along with individual management prescriptions. In some cases, management actions may require stringent protection restrictions and constraints. This plan will be

sensitive to and considerate of the military training mission by using a very conservative approach regarding restrictions and prohibitions. It will be fully coordinated with the ITAM program.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

6. OUTDOOR RECREATION MANAGEMENT ACTION PLAN

The Outdoor Recreation Management Action Plan will be a comprehensive plan directing all outdoor recreation activities on Fort Richardson with respect to the use of natural resources and the effects on the military mission. The plan will assess current and potential activities including, but not limited to: hunting and fishing, boating, off-road vehicle use (ATVs, snowmachines, airboats, airplanes), camping, picnicking, dog racing, horseback riding, berry picking, skiing, cabin use, birdwatching, and swimming. It will address issues including, but not limited to: access, management of use to avoid damage to wildlife habitat and training areas, harassment of wildlife, poaching, trespass, harvest limits, and usage fees. The plan will provide recommendations regarding the levels and types of use specific areas can sustain without adverse impacts. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities. This plan will be compatible with the military training mission and it will complement the ITAM program, ensuring both a healthy environment and an optimal training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

7. ITAM ACTION PLAN

The ITAM Action Plan will address all actions necessary to implement the ITAM plan on Fort Richardson. The ITAM plan will consist of monitoring the quality of training lands, providing data needed to make land use decisions, creating an awareness among land users of the importance of good land stewardship, preventing damage to land, and repairing damaged lands. The goal of the ITAM plan is to maximize mission use of training lands, minimize land maintenance costs and damage caused to the environment, and effectively meet natural resource management requirements. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities. The comprehensive plan will include methodologies, techniques, equipment and manpower requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. This plan will be compatible with the military training mission, ensuring both a healthy environment and an optimal training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

8. FIRE MANAGEMENT ACTION PLAN

The Fire Management Action Plan will identify and evaluate strategies for conducting wildfire management on Fort Richardson. The plan would reduce forest-fire hazard caused by incendiary training

and weapons, and would include a prescribed burning plan to enhance habitat as part of ecosystem management. The comprehensive plan will include methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and responsibilities of all partner agencies and/or groups participating in those activities.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N. 21 March 1997)

9. SOIL RESOURCES MANAGEMENT ACTION PLAN

The Erosion Control Action Plan will identify and evaluate sites in need of erosion control on Fort Richardson and strategies to repair them. The plan also will include detailed scopes of work required to repair each site. The comprehensive plan will include methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N. 21 March 1997)

10. CONSERVATION ENFORCEMENT ACTION PLAN

The Conservation Enforcement Action Plan will be jointly developed by Natural Resources and the Fort Richardson Provost Marshal. This action plan will outline responsibilities, communication, duties, regulations, and provisions for carrying out natural resources wildlife enforcement. Protocols will be developed to address communication, meetings, after-action reports, chain-of-command, etc.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N. 21 March 1997)

11. AERIAL MONITORING MANAGEMENT ACTION PLAN

The Aerial Monitoring Action Plan will identify plans for monitoring Fort Richardson from the air. Because of accessibility problems for much of Fort Richardsons' land, aerial monitoring is a tool that is required to keep track of military, recreation, trespass, and fish and wildlife use of training lands. This plan discusses the specific actions necessary to accomplish monitoring on Fort Richardson. Monitoring is a requirement of the Sikes Act and AR 200-3. Per Memorandum DAIM-ED-N, 21 March 1997, this component of the INRMP is a class 1 requirement.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N. 21 March 1997)

12. LANDSCAPING ACTION PLAN

The Landscaping Action Plan will address landscaping and beautification of the post. The plan will present the user with information regarding past and present techniques and procedures for landscaping at Fort Richardson. In addition to providing landscape designs, it will discuss various materials used in landscaping on post and will furnish a detailed listing of plants proven hardy for northern climates. The comprehensive plan will include methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and responsibilities of all partner agencies and/or groups participating in those activities.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3

CLASSIFICATION PRIORITY: Class I (DAIM-ED-N, 21 March 1997)

Appendix E. Vascular Flora of Fort Richardson

Taxon

Achillea millefolium
Achillea ptarmica
Achillea sibirica
Acomastylis rossii
Aconitum delphiniifolium
Aconitum delphiniifolium ssp. paradoxum
Actaea rubra
Adoxa moschatellina
Agrostis scabra
Allium schoenoprasum
Alnus sinuata
Alnus tenuifolia
Alnus viridis ssp. crispa
Alopecurus aequalis
Alopecurus alpinus
Amaranthus retroflexus
Amelanchier alnifolia
Andromeda polifolia
Anemone multifida var. saxicola ‡
Anemone narcissiflora ssp. villosissima
Anemone narcissiflora var. monantha
Anemone parviflora
Anemone richardsonii
Angelica genuflexa
Angelica lucida
Antennaria alpina
Antennaria friesiana
Antennaria friesiana ssp. alaskana
Antennaria monocephala
Antennaria rosea
Antennaria rosea ssp. pulvinata
Anthemis cotula
Anthemis tinctoria
Aphragmus eschscholtzianus ‡
Aquilegia formosa
Arabis hirsuta var. eschscholtziana
Arabis holboellii
Arabis lyrata ssp. kamchatica
Arctagrostis latifolia var. arundinacea
Arctagrostis latifolia var. latifolia
Arctagrostis poaeoides
Arctostaphylos uva-ursi
Arctous alpina
Arctous rubra
Armeria maritima ssp. arctica
Arnica angustifolia ssp. angustifolia
Arnica griscomii ssp. frigida
Arnica latifolia
Arnica lessingii
Arnica ovata
Artemisia arctica
Artemisia tilesii
Aster junciformis

Taxon

Aster sibiricus
Astragalus alpinus
Astragalus alpinus ssp. alpinus
Astragalus polaris
Astragalus umbellatus
Athyrium filix-femina
Atriplex gmelinii ‡
Avena fatua
Barbarea orthoceras
Beckmannia erucaeformis ssp. baicalensis
Betula glandulosa
Betula kenaica
Betula nana
Betula papyrifera
Bistorta vivipara
Boschniakia rossica
Botrychium boreale var. obtusilobum
Botrychium lanceolatum
Botrychium lunaria
Brassica rapa
Bromopsis inermis ssp. pumpellianus
Bromopsis inermis
Bromus tectorum
Calamagrostis canadensis
Calamagrostis deschampsoides
Calamagrostis inexpansa
Calamagrostis lapponica
Calamagrostis nutkaensis
Callitriche verna
Caltha palustris ssp. asarifolia
Campanula lasiocarpa
Campanula rotundifolia
Campanula uniflora
Capsella bursa-pastoris
Capsella rubella
Cardamine bellidifolia
Cardamine pratensis ssp. angustifolia
Cardamine umbellata
Carex aquatilis
Carex atosquama
Carex bigelowii
Carex buxbaumii
Carex canescens
Carex chordorrhiza
Carex circinata
Carex deweyana
Carex diandra
Carex dioica ssp. gynocrates
Carex garberi ssp. bifaria
Carex gmelinii
Carex kelloggii
Carex laeviculmis
Carex lachenalii
Carex lasiocarpa ssp. americana
Carex leptalea
Carex limosa

Taxon

Carex livida
Carex loliacea
Carex lyngbyei
Carex mackenziei
Carex macloviana ssp. pachystachya
Carex macrochaeta
Carex magellanica ssp. irrigua
Carex media
Carex membranacea
Carex mertensii
Carex microchaeta
Carex microchaeta ssp. nesophila
Carex micropoda
Carex nigricans
Carex obtusata
Carex oederi
Carex pauciflora
Carex pluriflora
Carex podocarpa
Carex praticola
Carex ramenskii
Carex rariflora
Carex rostrata
Carex rotundata
Carex saxatilis
Carex scirpoidea
Carex spectabilis
Carex tenuiflora
Carex utriculata
Carex vaginata
Cassiope lycopodioides
Cassiope stellariana
Cassiope tetragona
Castilleja unalaschcensis
Cerastium arvense
Cerastium beeringianum var. beeringianum
Cerastium fontanum
Chamaedaphne calyculata
Chenopodium album
Chrysanthemum arcticum
Chrysanthemum leucanthemum
Chrysosplenium tetrandrum
Cicuta douglasii
Cicuta virosa
Circaea alpina
Claytonia sarmentosa
Coeloglossum viride ssp. bracteatum
Comarum palustre
Conioselinum pacificum
Corallorrhiza trifida
Cornus canadensis
Cornus suecica
Corydalis pauciflora
Corydalis sempervirens
Crepis elegans
Crepis nana

Taxon

Crepis tectorum
Cryptogramma acrostichoides
Cystopteris fragilis
Cystopteris montana
Dactylis glomerata
Delphinium glaucum
Deschampsia cespitosa ssp. cespitosa
Descurainia sophioides
Diapensia lapponica
Dodecatheon frigidum
Dodecatheon pulchellum
Douglasia alaskana ‡
Draba alpina
Draba aurea
Draba borealis
Draba cana
Draba crassifolia
Draba fladnizensis
Draba glabella
Draba lactea
Draba lonchocarpa
Draba longipes
Draba nivalis
Draba ruaxes
Draba stenoloba
Draba stenopetala
Drosera anglica
Drosera rotundifolia
Dryas alaskensis
Dryas drummondii
Dryas integrifolia
Dryas octopetala
Dryopteris dilatata
Dryopteris fragrans
Eleocharis kamtschatica
Eleocharis palustris
Eleocharis quinqueflora ‡
Elymus alaskanus ssp. alaskanus
Elymus glaucus
Elymus sibiricus
Elymus trachycaulis ssp. andinus
Elymus trachycaulis ssp. novae-angliae
Elytrigia repens
Empetrum hermaphroditum
Empetrum nigrum
Epilobium anagallidifolium
Epilobium angustifolium
Epilobium ciliatum ssp. glandulosum
Epilobium hornemannii ssp. behringianum
Epilobium hornemannii ssp. hornemannii
Epilobium latifolium
Epilobium palustre
Equisetum arvense
Equisetum fluviatile
Equisetum palustre
Equisetum pratense

Taxon

Equisetum scirpoides
Equisetum sylvaticum
Equisetum variegatum
Erigeron acris
Erigeron humilis
Erigeron peregrinus
Erigeron purpuratus
Eriophorum angustifolium ssp. subarcticum
Eriophorum gracile
Eriophorum russeolum
Eriophorum russeolum var. albidum
Eriophorum scheuchzeri
Eriophorum viridi-carinatum
Erucastrum gallicum
Erysimum cheiranthoides
Erysimum cheiranthoides ssp. altum
Euphrasia disjuncta
Eutrema edwardsii
Festuca altaica
Festuca brevissima
Festuca rubra
Festuca vivipara
Fragaria chiloensis
Fritillaria camschatcensis
Galeopsis bifida
Galium boreale
Galium trifidum ssp. trifidum
Galium triflorum
Gastrolychnis apetala
Gentiana glauca
Gentianella amarella
Gentianella propinqua ssp. propinqua
Geocaulon lividum
Geranium erianthum
Geranium pusillum
Geum macrophyllum ssp. macrophyllum
Geum perincisum
Glaux maritima
Glyceria borealis
Glyceria striata ssp. stricta
Goodyera repens var. ophioides
Gymnocarpium dryopteris
Hammarbya paludosa
Hedysarum alpinum
Helianthus annuus
Heracleum lanatum
Heuchera glabra
Hieracium triste
Hierochloa alpina
Hierochloa odorata
Hippuris montana
Hippuris tetraphylla
Hippuris vulgaris
Hordeum brachyantherum
Hordeum jubatum
Huperzia selago

Taxon

Huperzia selago ssp. chinense
Impatiens noli-tangere
Iris setosa
Isoetes echinospora
Juncus alpinus
Juncus biglumis
Juncus bufonius
Juncus castaneus
Juncus castaneus ssp. castaneus
Juncus castaneus ssp. leucochlamys
Juncus drummondii
Juncus ensifolius
Juncus mertensianus
Juncus stygius ssp. americanus
Juncus triglumis
Juniperus communis
Lathyrus palustris ssp. pilosus
Ledum groenlandicum
Ledum palustre ssp. decumbens
Lemna minor
Lepidium densiflorum
Leptarrhena pyrolifolia
Leymus mollis
Ligusticum scoticum ssp. hultenii
Linaria vulgaris
Linnaea borealis
Listera cordata
Lloydia serotina
Loiseleuria procumbens
Lolium multiflorum
Luetkea pectinata
Lupinus nootkatensis
Lupinus polyphyllus
Luzula arctica ssp. latifolia
Luzula arcuata
Luzula arcuata ssp. unalaschcensis
Luzula confusa
Luzula multiflora var. frigida
Luzula parviflora
Luzula spicata
Luzula wahlenbergii
Lycopodium alpinum
Lycopodium annotinum
Lycopodium clavatum ssp. monostachyon
Lycopodium complanatum
Lycopodium sabinaefolium var. sitchense
Lysimachia thyrsiflora
Malaxis monophylla var. brachypoda
Matricaria matricarioides
Matteuccia struthiopteris
Medicago falcata
Medicago sativa
Melandrium noctiflorum
Melilotus albus
Melilotus officinalis
Mentha arvensis

Taxon

Menyanthes trifoliata
Menziesia ferruginea
Mertensia paniculata
Mimulus guttatus
Minuartia biflora
Minuartia macrocarpa
Minuartia obtusiloba
Minuartia rubella
Mitella pentandra
Moehringia lateriflora
Moneses uniflora
Myosotis alpestris
Myrica gale
Myriophyllum exalbescens
Myriophyllum verticillatum
Najas flexilis
Neslia paniculata
Nuphar polysepalum
Oplopanax horridus
Orthilia secunda
Osmorhiza depauperata
Oxycoccus microcarpus
Oxyria digyna
Oxytropis bryophila
Oxytropis huddelsonii
Oxytropis maydelliana
Oxytropis varians
Papaver alboroseum ‡
Papaver nudicaule
Papaver radicum ssp. radicum
Parnassia kotzebuei
Parnassia palustris
Parnassia palustris ssp. neogaea
Pedicularis capitata
Pedicularis labradorica
Pedicularis lanata
Pedicularis langsдорфii
Pedicularis verticillata
Pentaphylloides floribunda
Petasites frigidus
Petasites sagittatus
Phalaris arundinacea
Phleum commutatum var. americanum
Phleum pratense
Phyllodoce aleutica
Picea glauca
Picea mariana
Pinguicula villosa
Plagiobothrys scouleri var. hispidulus
Plantago major var. major
Plantago maritima ssp. juncoides
Platanthera dilatata
Platanthera hyperborea var. hyperborea
Platanthera hyperborea var. viridiflora
Platanthera obtusata
Poa alpigena

Taxon

Poa alpina
Poa annua
Poa arctica
Poa eminens
Poa glauca
Poa palustris
Poa paucispicula
Poa pratensis
Poa pseudoabbreviata
Polemonium acutiflorum
Polemonium pulcherrimum
Polygonum amphibium
Polygonum aviculare
Polygonum convolvulus
Polygonum fowleri
Polygonum lapathifolium
Polygonum pennsylvanicum ssp. oneillii
Populus balsamifera
Populus balsamifera ssp. balsamifera
Populus balsamifera ssp. trichocarpa
Populus tremuloides
Potamogeton alpinus
Potamogeton epihydrus
Potamogeton filiformis
Potamogeton gramineus
Potamogeton natans
Potamogeton pectinatus
Potamogeton praelongus
Potamogeton richardsonii
Potamogeton vaginatus
Potamogeton zosteriformis
Potentilla anserina
Potentilla diversifolia
Potentilla egedii ssp. grandis
Potentilla hyparctica
Potentilla multifida
Potentilla norvegica
Potentilla uniflora
Primula cuneifolia ssp. saxifragifolia
Puccinellia grandis
Puccinellia nutkaensis
Puccinellia phryganodes
Pyrola asarifolia
Pyrola asarifolia var. purpurea
Pyrola chlorantha
Pyrola grandiflora
Pyrola minor
Ranunculus abortivus
Ranunculus cymbalaria
Ranunculus eschscholtzii
Ranunculus gmelini ssp. gmelini
Ranunculus hyperboreus
Ranunculus lapponicus
Ranunculus macounii
Ranunculus nivalis
Ranunculus occidentalis

Taxon

Ranunculus pygmaeus
Ranunculus sceleratus spp. multifidus
Ranunculus trichophyllus
Ranunculus trichophyllus var. trichophyllus
Rhinanthus minor
Rhodiola integrifolia
Ribes hudsonianum
Ribes lacustre
Ribes laxiflorum
Ribes triste
Romanzoffia sitchensis
Rorippa barbareaefolia
Rorippa palustris ssp. hispida
Rorippa palustris ssp. palustris
Rorippa sylvestris
Rosa acicularis
Rosa nutkana
Rubus arcticus
Rubus chamaemorus
Rubus idaeus
Rubus pedatus
Rubus stellatus
Rumex acetosella
Rumex arcticus
Rumex crispus
Rumex fenestratus
Rumex transitorius
Ruppia spiralis
Sagina nivalis
Sagina saginoides
Salicornia europaea ‡
Salix alaxensis
Salix arctica
Salix barclayi
Salix bebbiana
Salix brachycarpa ssp. niphoclada
Salix commutata
Salix fuscescens
Salix glauca
Salix lanata ssp. richardsonii
Salix lucida ssp. lasiandra
Salix myrtilifolia
Salix ovalifolia
Salix planifolia ssp. pulchra
Salix reticulata
Salix phlebophylla
Salix polaris
Salix rotundifolia
Salix scouleriana
Salix sitchensis
Sambucus racemosa
Sanguisorba stipulata
Saxifraga adscendens
Saxifraga bronchialis
Saxifraga calycina
Saxifraga cernua

Taxon

Saxifraga cespitosa
Saxifraga eschscholtzii
Saxifraga flagellaris
Saxifraga foliolosa
Saxifraga hirculus
Saxifraga lyallii ssp. hultenii
Saxifraga nelsoniana
Saxifraga nivalis
Saxifraga oppositifolia
Saxifraga reflexa
Saxifraga rivularis
Saxifraga serpyllifolia
Saxifraga tricuspidata
Scheuchzeria palustris
Schizachne purpurascens
Scirpus paludosus
Scirpus validus
Scutellaria galericulata
Selaginella selaginoides
Senecio lugens
Senecio pauciflorus
Senecio triangularis
Senecio vulgaris
Shepherdia canadensis
Sibbaldia procumbens
Silene acaulis
Smilacina stellata
Solidago lepidota
Solidago multiradiata
Sorbus scopulina
Sparganium angustifolium
Sparganium hyperboreum
Sparganium minimum
Spergula arvensis
Spergularia canadensis
Spiraea beauverdiana
Spiranthes romanzoffiana
Stellaria borealis
Stellaria borealis ssp. sitchana
Stellaria calycantha
Stellaria crassifolia
Stellaria humifusa
Stellaria laeta
Stellaria longifolia
Stellaria media
Stellaria monantha
Stellaria umbellata ‡
Streptopus amplexifolius
Swertia perennis
Swida stolonifera
Taraxacum alaskanum
Taraxacum carneocoloratum ‡
Taraxacum officinale
Thalictrum alpinum
Thalictrum sparsiflorum
Thelypteris phegopteris

Taxon

Thlaspi arcticum ‡
Tofieldia coccinea
Tofieldia glutinosa
Tofieldia pusilla
Trichophorum alpinum
Trichophorum cespitosum
Trientalis europaea
Trifolium hybridum
Trifolium pratense
Trifolium repens
Triglochin maritimum
Triglochin palustris
Tripleurospermum inodorum
Trisetum spicatum
Trisetum spicatum ssp. alaskanum
Trisetum spicatum ssp. molle
Triticum aestivum
Tsuga mertensiana
Typha latifolia
Urtica dioica ssp. gracilis
Utricularia intermedia
Utricularia minor
Utricularia vulgaris ssp. macrorhiza
Vaccinium cespitosum
Vaccinium ovalifolium
Vaccinium uliginosum
Vaccinium vitis-idaea
Vahlodea atropurpurea ssp. paramushirensis
Valeriana capitata
Valeriana sitchensis
Veratrum viride
Veronica americana
Veronica wormskjoldii
Viburnum edule
Vicia cracca
Viola epipsila
Viola langsдорфii
Viola renifolia
Viola selkirkii ‡
Woodsia ilvensis
Zannichellia palustris ‡
Zigadenus elegans

‡ Rare species listed in the AKNHP's Biological Conservation Database.

Sources: Lichvar, R., C. Racine, B. Murray, and G. Tande. 1997. *A Floristic Inventory of Vascular and Cryptogam Plant Species at Fort Richardson, Alaska*.

Alaska Region LCTA program at Fort Richardson, 1997-2000.

Appendix F. Fauna of Fort Richardson

Mammals. This list includes confirmed or probable species on Fort Richardson and Elmendorf AFB.

Scientific Name	Common Name	Habitat
<i>Microtus miurus</i>	Alaska (singing) vole	slopes
<i>Microtus pennsylvanicus</i>	meadow vole	meadow
<i>Microtus oeconomus</i>	tundra vole	alpine
<i>Clethrionomys rutilus</i>	northern redback vole	alpine, forest
<i>Synaptomys borealis</i>	northern bog lemming	
<i>Zapus hudsonius</i>	meadow jumping mouse	lowland
<i>Sorex hoyi</i>	pygmy shrew	forest, grassland
<i>Sorex palustris</i>	water shrew	streams
<i>Sorex monticolus</i>	dusky shrew	muskeg, forest
<i>Sorex cinereus</i>	common (masked) shrew	subalpine
<i>Sorex tundrensis</i>	tundra shrew	tamarack, spruce swamps
<i>Mus musculus</i>	house mouse	
<i>Mustela erminea</i>	shorttail weasel (ermine)	forest, brush
<i>Mustela nivalis</i>	least weasel	brush
<i>Marmota caligata</i>	hoary marmot	alpine
<i>Lepus americanus</i>	snowshoe (varying) hare	forest, brush
<i>Ochotona collaris</i>	collared pika	
<i>Spermophilus parryii</i>	arctic ground squirrel	alpine
<i>Gulo gulo</i>	wolverine	subalpine, forest
<i>Ursus arctos</i>	brown (grizzly) bear	alpine, subalpine
<i>Ursus americanus</i>	black bear	forests
<i>Canis latrans</i>	coyote	ubiquitous
<i>Canis lupus</i>	gray wolf	alpine, forest, muskeg
<i>Vulpes vulpes</i>	red fox	ubiquitous
<i>Lynx canadensis</i>	lynx	forest, muskeg
<i>Ovis dalli</i>	Dall sheep	alpine
<i>Alces alces</i>	moose	brush, forest
<i>Tamiasciurus hudsonicus</i>	red squirrel	forest
<i>Glaucomys sabrinus</i>	northern flying squirrel	forest
<i>Martes americana</i>	marten	forest
<i>Myotis lucifugus</i>	little brown bat	lowlands
<i>Castor canadensis</i>	beaver	streams, marshes
<i>Ondatra zibethicus</i>	muskrat	lakes, marshes, lowlands
<i>Mustela vison</i>	mink	lakes, streams, lowlands
<i>Lutra canadensis</i>	river otter	lowlands lakes, streams
<i>Erethizon dorsatum</i>	porcupine	forests

Sources: Cook, J.A., and C.T. Seaton. 1996. *Checklist to the Mammals of Fort Richardson, Alaska*.

Gossweiler, W.A. 1984. *Fort Richardson Natural Resource Plan. Table 4.*

Elmendorf AFB. 1994. *Natural Resources Management Plan. Appendix E.*

Fish. This list includes species confirmed on both Fort Richardson and Elmendorf Air Force Base.

Scientific Name	Common Name
<i>Oncorhynchus gorbuscha</i>	pink salmon
<i>Oncorhynchus keta</i>	chum salmon
<i>Oncorhynchus kisutch</i>	coho salmon
<i>Oncorhynchus nerka</i>	sockeye salmon
<i>Oncorhynchus tshawytscha</i>	chinook salmon
<i>Salvelinus malma</i>	Dolly Varden
<i>Salvelinus alpinus</i>	arctic char
<i>Onchorynchus mykiss</i>	rainbow trout (stocked)
<i>Gasterosteus aculeatus</i>	three spine stickleback
<i>Pungitius pungitius</i>	nine spine stickleback ^
<i>Cottus cognatus</i>	slimy sculpin ^
<i>Thymallus arcticus</i>	arctic grayling

^ Confirmed on Elmendorf AFB only.

Sources: Gossweiler, W.A. 1984. *Fort Richardson Natural Resources Plan*. Table 4

Rothe, et al. 1983. *Natural Resource Inventory of Elmendorf Air Force Base, Alaska*.

Amphibians.

Scientific Name	Common Name
<i>Rana sylvatica</i>	wood frog

Birds. This list includes species confirmed on both Fort Richardson and Elmendorf Air Force Base.

Scientific Name	Common Name
LOONS, GREBES, PELICANS	
<i>Gavia pacifica</i>	Pacific Loon
<i>Gavia immer</i>	Common Loon
<i>Gavia stellata</i>	Red-throated Loon
<i>Podiceps grisegena</i>	Red-necked Grebe
<i>Podiceps auritus</i>	Horned Grebe

WATERFOWL

<i>Cygnus columbianus</i>	Tundra Swan
<i>Cygnus buccinator</i>	Trumpeter Swan
<i>Anser albifrons</i>	Greater White-fronted Goose
<i>Chen caerulescens</i>	Snow Goose
<i>Branta canadensis</i>	Canada Goose
<i>Anas strepera</i>	Gadwall

<i>Anas platyrhynchos</i>	Mallard
<i>Anas crecca</i>	Green-winged Teal
<i>Anas americana</i>	American Widgeon
<i>Anas penelope</i>	Eurasian Widgeon
<i>Anas acuta</i>	Northern Pintail
<i>Anas clypeata</i>	Northern Shoveler
<i>Anas discors</i>	Blue-winged Teal
<i>Anas cyanoptera</i>	Cinnamon Teal
<i>Aythya valisineria</i>	Canvasback
<i>Aythya collaris</i>	Ring-necked Duck
<i>Aythya marila</i>	Greater Scaup
<i>Aythya affinis</i>	Lesser Scaup
<i>Bucephala islandica</i>	Barrow's Goldeneye
<i>Bucephala clangula</i>	Common Goldeneye
<i>Bucephala albeola</i>	Bufflehead
<i>Mergus merganser</i>	Common Merganser
<i>Histrionicus histrionicus</i>	Harlequin Duck
<i>Melanitta fusca</i>	White-winged Scoter ^

VULTURES, HAWKS & FALCONS

<i>Pandion haliaetus</i>	Osprey
<i>Haliaeetus leucocephalus</i>	Bald Eagle
<i>Aquila chrysaetus</i>	Golden Eagle
<i>Circus cyaneus</i>	Northern Harrier
<i>Falco columbarius</i>	Merlin
<i>Falco rusticolus</i>	Gyr Falcon
<i>Falco peregrinus</i>	Peregrine Falcon
<i>Falco sparverius</i>	American kestrel
<i>Buteo jamaicensis</i>	Red-tailed Hawk
<i>Buteo lagopus</i>	Rough-legged Hawk
<i>Accipiter striatus</i>	Sharp-shinned Hawk
<i>Accipiter gentilis</i>	Northern Goshawk

OWLS

<i>Aegolius acadicus</i>	Northern Saw-whet Owl
<i>Aegolius funereus</i>	Boreal Owl
<i>Asio flammeus</i>	Short-eared Owl
<i>Bubo virginianus</i>	Great Horned Owl
<i>Strix nebulosa</i>	Great Gray Owl ^
<i>Surnia ulula</i>	Hawk Owl

GALLINACEOUS BIRDS

<i>Phasianus colchicus</i>	Ring-necked Pheasant
<i>Lagopus lagopus</i>	Willow Ptarmigan
<i>Lagopus mutus</i>	Rock Ptarmigan
<i>Lagopus leucurus</i>	White-tailed Ptarmigan
<i>Dendragapus canadensis</i>	Spruce Grouse

CRANES

Grus canadensis

Sandhill Crane

SHOREBIRDS

Charadrius semipalmatus

Semipalmated Plover

Charadrius vociferus

Killdeer

Pluvialis squatarola

Black-Bellied Plover

Pluvialis dominica

American Golden-Plover

Limosa haemastica

Hudsonian Godwit

Numenius phaeopus

Whimbrel

Tringa melanoleuca

Greater Yellowlegs

Tringa flavipes

Lesser Yellowlegs

Tringa solitaria

Solitary Sandpiper

Heteroscelus incanus

Wandering Tattler

Actitis macularia

Spotted Sandpiper

Phalaropus tricolor

Wilson's Phalarope

Phalaropus lobatus

Red-necked Phalarope

Limnodromus griseus

Short-billed Dowitcher

Limnodromus scolopaceus

Long-billed Dowitcher

Gallinago gallinago

Common Snipe

Arenaria interpres

Ruddy Turnstone

Aphriza virgata

Surfbird

Calidris pusilla

Semipalmated Sandpiper

Calidris mauri

Western Sandpiper

Calidris minutilla

Least Sandpiper

Calidris bairdii

Baird's Sandpiper

Calidris melanotos

Pectoral Sandpiper

Calidris alpina

Dunlin

GULLS & TERNS

Larus argentatus

Herring Gull

Larus canus

Mew Gull

Larus glaucescens

Glaucous-winged Gull

Larus philadelphia

Bonaparte's Gull

Sterna caspia

Caspian Tern

Sterna paradisaea

Arctic Tern

Sterna aleutica

Aleutian Tern ^

KINGFISHERS

Ceryle alcyon

Belted Kingfisher

DOVES

Columba livia

Rock Dove

WOODPECKERS

Picoides pubescens
Picoides villosus
Picoides tridactylus
Picoides arcticus
Colaptes auratus

Downy Woodpecker
Hairy Woodpecker
Three-toed Woodpecker
Black-backed Woodpecker
Northern Flicker

PASSERINES

Empidonax alnorum
Contopus borealis
Contopus sordidulus
Sayornis saya
Lanius excubitor
Perisoreus canadensis
Cyanocitta stelleri
Pica pica
Corvus caurinus
Corvus corax
Eremophila alpestris
Tachycineta bicolor
Tachycineta thalassina
Riparia riparia
Stelgidopteryx serripennis
Hirundo pyrrhonota
Parus atricapillus
Parus hudsonicus
Sitta canadensis
Certhia americana
Troglodytes troglodytes
Cinclus mexicanus
Regulus satropa
Regulus calendula
Phylloscopus borealis
Oenanthe oenanthe
Myadestes townsendi
Catharus minima
Catharus guttata
Catharus ustulatus
Turdus migratorius
Ixoreus naevius
Anthus rubescens
Bombycilla garrulus
Vermivora celata
Dendroica petechia
Dendroica coronata
Dendroica townsendi
Dendroica striata
Seiurus noveboracensis
Wilsonia pusilla
Spizella arborea
Passerculus sandwichensis

Alder Flycatcher
Olive-sided Flycatcher
Western Wood-Pewee
Say's Phoebe
Northern Shrike
Gray Jay
Stellar's Jay
Black-billed Magpie
Northwestern Crow ^
Common Raven
Horned Lark
Tree Swallow
Violet-green Swallow
Bank Swallow
Rough-winged Swallow
Cliff Swallow
Black-capped Chickadee
Boreal Chickadee
Red-breasted Nuthatch
Brown Creeper
Winter Wren
American Dipper
Golden-crowned Kinglet
Ruby-crowned Kinglet
Arctic Warbler
Northern Wheatear
Townsend's Solitaire
Gray-cheeked Thrush
Hermit Thrush
Swainson's Thrush
American Robin
Varied Thrush
American Pipit
Bohemian Waxwing
Orange-crowned Warbler
Yellow Warbler
Yellow-rumped Warbler
Townsend's Warbler
Blackpoll Warbler
Northern Waterthrush
Wilson's Warbler
American Tree Sparrow
Savannah Sparrow

<i>Melospiza lincolni</i>	Lincoln's Sparrow
<i>Calcarius lapponicus</i>	Lapland Longspur
<i>Passerella iliaca</i>	Fox Sparrow
<i>Melospiza melodia</i>	Song Sparrow
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
<i>Zonotrichia atricapilla</i>	Golden-crowned Sparrow
<i>Junco hyemalis</i>	Dark-eyed Junco
<i>Leucosticte tephrocotis</i>	Gray-crowned Rosy-Finch
<i>Pinicola enucleator</i>	Pine Grosbeak
<i>Loxia curvirostra</i>	Red Crossbill
<i>Loxia leucoptera</i>	White-winged Crossbill
<i>Euphagus carolinus</i>	Rusty Blackbird
<i>Carduelis flammea</i>	Common Redpoll
<i>Carduelis hornemanni</i>	Hoary Redpoll ^
<i>Carduelis pinus</i>	Pine Siskin

^ Confirmed on Elmendorf AFB only

Sources: Andres, B.A., A.J. Sorenson, and B.T. Browne. 2001. *Inventory and monitoring of neotropical migratory landbirds on Fort Richardson, Alaska*. Table 10.

Gossweiler, W.A. 1984. *Fort Richardson Natural Resources Plan*. Table 4

CH2M Hill, 1994. *Comprehensive Evaluation Report, Eagle River Flats, Fort Richardson, Alaska*. Table 2-5.

Elmendorf AFB. 1994. *Natural Resources Management Plan*. Appendix E.

Appendix G. Federal Laws, Regulations, Executive Orders, Directives, and Policies.

Federal Laws

Americans with Disabilities Act of 1990 (PL 101-336; 42 USC 12101)

- Policy to ensure access, to the maximum extent possible, for persons with disabilities. Notes that wilderness areas are not included under this act. Some provisions are made maintaining historic structures.
- Penalties are enforced under 29 USC 794a dealing with citizen suits.

Antiquities Act of 1906 (PL 59-209; 16 USC 431-433)

- Policy providing for the preservation of historic and prehistoric sites on federal lands. Prohibits taking, excavation, or other destruction of sites.
- Penalties: Misdemeanor charges with fines up to \$500 and/or 90 days imprisonment.

Archaeological and Historic (Data) Preservation Act Of 1974 (PL 93-291; 16 USC 469 *et seq.*) (AKA Archeological Recovery Act and Reservoir Salvage Act of 1960) (PL 86-523; 16 USC 469)

- Policy to protect and preserve any historic and archaeological data collected from sites which would otherwise be lost or destroyed as a result of any federally funded or licensed activity or program. Additionally, this act provides that up to one percent of project funds may be appropriated to conduct data recovery.
- No penalties are directly associated with this act.

Archaeological Resources Protection Act of 1979 (PL 96-95; 16 USC 470aa-11)

- Policy to prohibit the sale, purchase, exchange, transport or receipt of any archeological resource if that resource was taken from public or Indian lands or in violation of state or local law. Vandalism, alteration, or destruction of historic and prehistoric sites are also covered under this act.
- Penalties - Criminal: Up to \$20,000 and/or two years imprisonment, for first offense, \$100,000 and/or five years imprisonment for second offense. Civil: Forfeiture of vehicles and equipment used in illegal activities. Forfeiture of illegally obtained artifacts.

Bald and Golden Eagle Protection Act of 1984 (16 USC 668-668d)

- This act prohibits the taking, possession, transaction, and transport of bald and golden eagles. Exemptions may be authorized by the Secretary of the Interior.
- Penalties - Criminal: Fines up to \$5,000 and/or one year imprisonment Fines and prison terms doubled for second offense. Civil: Fines up to \$5,000 per violation. Loss of federal lease rights, and confiscation of vehicles used in the violation of this law.

Clean Air Act (42 USC 7401-7642)

- Policy to prohibit, limit, and regulate the emission of dangerous and noxious pollutants into the environment.
- Penalties - Criminal: Up to \$250,000 and/or five years imprisonment for first offense. \$500,000 and/or 10 years imprisonment for second offense. Corporations are subject to fines up to \$500,000 for first offense. Knowing endangerment is punishable by fine under Title 18 and/or 15 years imprisonment for an individual and \$1,000,000 for a corporation. Penalties are doubled for second offenses.

Clean Water Act of 1977 (33 USC 1251-1387)

- This act stipulates effluent standards for the discharge of pollutants into navigable waters of the U.S. Promotes research at the federal and state levels concerning issues of water pollution.
- Penalties - Criminal: Negligent violations, fines up to \$25,000 per day of violation and/or up to one year imprisonment. Doubled for repeat offenders. Knowledgeable violations, fines up to \$50,000 per day of violation and/or up to three years imprisonment. Doubled for repeat offenders. Knowledgeable endangerment, fines up to \$230,000 and/or up to 15-year imprisonment. If violator is an organization, fines up to \$1,000,000. Doubled for repeat offenders. Civil: Accidental violation, fines up to \$50,000. Willful violation, fines up to \$250,000. Owners or operators of vessels or facilities may be liable for clean-up costs

up to the amount of \$30,000,000. Citizen Suits: Any citizen may bring suit against any person, the U.S. government, or governmental agency for violations of this act.

Coastal Zone Management Act (PL 92-583; 16 USC 1451 *et seq.*)

- Policy to preserve, protect, develop, restore, and enhance the nation's coastal zones. Provides funding opportunities to accomplish this goal. Establishes the Walter B. Jones excellence in coastal zone management awards. Also established the National Estuarine Research System.
- No penalties are directly associated with this act.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA and SARA) of 1980 (42 USC 9601-9675)

- Policy which defines liabilities for damage or destruction of the environment. The DOD can be held liable for releases damaging the environment. Limits on fines do not limit liabilities in regards to actual clean-up costs.
- Penalties - Civil fines up to \$5 million for vessels carrying hazardous wastes (\$50 million for an incineration vessel). Civil fines up to \$30 million for a motor vehicle, aircraft, pipeline, or rolling stock, but no less than \$5 million. Civil fines up to \$50 million for any facility.

Conservation and Rehabilitation Program on Military and Public Lands (PL 93-452)

- Policy to set up and maintain conservation and rehabilitation programs on military and public lands. The goal is to preserve areas for natural resources. Provides funding and policy guidance for programs. Allows for imposing fines on individuals who violate regulations for land use. \$1,000 for hunting and fishing without appropriate permit. \$500 for violation of other regulations.

Conservation Programs on Military Installations (AKA Sikes Act) (PL 86-797; 16 USC 670 *et seq.*)

- Policy to develop land areas for habitat improvement and outdoor recreation. Allows for permitting of hunting and control of off-road vehicles. No fines on military reservations.

Emergency Planning and Community-Right-to-Know Act of 1986 (42 USC 11001-11050)

- Policy to inventory and report holdings of hazardous materials. Also, to report releases of hazardous materials within specified time frames. Some limitations on liability of governmental entities.
- Penalties - Criminal: \$25,000 per day in violation, up to two years imprisonment. Civil: \$25,000 per day in violation. Citizen Suits: Any citizen may bring suit against any person, the U.S. government, or governmental agency for violation of this act.

Emergency Wetlands Resources Act of 1986 (16 USC 3901-3932)

- This act is intended to promote the conservation of wetlands and to comply with international obligations of migratory bird treaties.
- No penalties are associated with this act.

Endangered Species Act of 1973 (PL 93-205; 16 USC 1531-1543)

- Policy to protect any species (fish, wildlife, or plants) listed on the endangered species and the threatened species list from hunting, taking for importation, or exportation to or from the United States. Establishes the endangered and threatened species list.
- Penalties - Criminal: Fines up to \$25,000 and/or one year imprisonment. Civil: Fines up to \$10,000 for violation of this act. Forfeiture of any fish, wildlife, plants taken and equipment and vehicles used in violation of this act.

Environmental Quality Improvement Act of 1970 (42 USC 4371-4375)

- Establishes the Office of Environmental Quality. This office is tasked with the goal of enhancing environmental quality via research on negative human impacts on the environment. Also, responsible for coordinating various efforts of federal agencies engaged in minimizing the impact of their missions.
- No penalties are associated with this act.

Erosion Protection Act (33 USC 426e-426h)

- Provides funding mechanism for specific erosion protection projects. Each project must be approved by Congress, the Board on Coastal Engineering Research, or by the Chief of Engineers of the U.S. Army.
- No penalties are associated with this act.

Estuary Protection Act of 1968 (PL 90-454; 82 Stat 625; 16 USC 1221)

- Policy to protect, conserve, and restore the nation's valuable estuaries in a manner that adequately and reasonably maintains a balance between the national need for such protection of estuaries and the need for growth and development of these areas.
- No penalties are directly associated with this act.

Federal Facilities Compliance Act of 1992 (USC)

- This act amends the Resource Conservation and Recovery Act (RCRA, 42 USC 6961) so that the FFCRA waives sovereign immunity in RCRA cases. The act allows the EPA Administrator to enforce RCRA provisions for violations by federal agencies. Requires annual inspections of federal facilities. All fees or fines assessed against any federal agency must be paid out of that agency's standard appropriation.
- No penalties are directly associated with this act.

Federal Insecticide, Fungicide and Rodenticide Act (7 USC 136-136y)

- Policy and relations pertaining to the usage of pesticides. Dealing mostly with applications, labeling, and banned products. Provides penalties for improper usage.
- Penalties - Criminal: Commercial - Fines up to \$25,000 and/or one year imprisonment; Private - Fines up to \$1000 and/or 30 days imprisonment. Civil: Commercial - Fines up to \$5000; Private - Fines up to \$1000.

Federal Land Policy and Management Act (43 USC 1701-1784)

- Policy regarding the management of federal lands.
- No penalties are directly associated with this act.

Federal Water Pollution Control Act (AKA Clean Water Act) (33 USC 1251-1376)

- Policy to protect U.S. water resources from pollution and to find ways to improve conditions. The act provides funding opportunities for research and development of water resources and sets standards and limits for effluent releases into water resources. Includes issues of dredge and fill, hazardous wastes, oil spills, etc.
- Penalties - Criminal: For individuals under negligence, fines range from \$2500 - \$25,000 per day of violation and/or one year imprisonment. Knowing violation fines range from \$5000 - \$50,000 per day of violation and/or three years imprisonment. Knowing endangerment fines are up to \$250,000 and/or 15 years imprisonment. Fine and prison term are doubled for second offense. For vessels, unknowing violations are \$50,000 plus clean-up costs up to \$250,000. For vessels, knowing violations are \$250,000 plus full clean-up costs. For facilities, fines up to \$50 million plus full clean-up costs for knowing violations. Civil: \$10,000 per day of violation, injunctions. Citizen suits: Any citizen may bring suit against any person, the U.S. government, or governmental agency for violations of this act.

Federal Water Project Recreation Act to 1965 (PL 89-72; 79 Stat 213; 16 USC 460[1]-12 to 460[1]-21)

- Policy to include recreation and fish and wildlife considerations in any water resources project. Discusses methods of funding.
- No penalties are directly associated with this act.

Fish and Wildlife Conservation Act of 1980 (FL 96-366; 16 USC 2901)

- Policy to promote fish and wildlife conservation. The act provides for funding of conservation programs.
- No penalties are directly associated with this act.

Fish and Wildlife Coordination Act (PL 85-624; 16 USC 661 *et seq.*)

- Policy to elevate the protection of wildlife resources to the status of water resource protection. Provides authority to Secretary of Interior to provide assistance to other agencies, state and local governments, and public and private organizations to develop, stock, rear, and protect all species of wildlife and their habitats. Provides specific protection for Bald and Golden Eagles and for endangered species of fish and wildlife.

- Penalties - Criminal: Fines up to \$5000 and/or one year imprisonment. Fines and prison terms are doubled for second offense. Civil: Fines up to \$5000 per offense, each violation is considered a second offense.

Forest and Rangeland Renewable Resources Planning Act of 1974 (16 USC 1601 *et seq.*)

- Policy for forest and rangeland management.
- No penalties are directly associated with this act.

Hazardous Materials Transportation Act (42 USC 1801 *et seq.* changed title to 49 USC 1471)

- Policy to restrict the transportation of hazardous materials.
- Penalties - Criminal: Fines up to \$25,000 and/or five years imprisonment. Civil: Fines up to \$50,000.

Historic Sites Act of 1935 (PL 74-292; 16 USC 461-467)

- Policy to preserve and protect historic and prehistoric properties of national significance. Established the National Historic Landmarks Program and set standards for inclusion of landmarks.
- No penalties are directly associated with this act.

Hunting, Fishing and Trapping on Military Lands [An update of the Military Construction Authorization Act]

- Policy requiring the Department of Defense to comply with fish and game laws of the state or territory in which it is located.
- No penalties are directly associated with this act.

Land and Water Conservation Fund Act of 1963 (PL 88-578; 78 Stat 897; 16 USC 460d, 460[1]4 to 460[1]-11)

- Policy to provide funding for the encouragement of development of land and water-based recreation and to ensure the stability of the recreation areas.
- No penalties are directly associated with this act.

Marine Mammal Protection Act of 1972 (PL 92-522; 16 USC 1361)

- Policy to prohibit the taking or importation of marine mammals and marine mammal products.
- Penalties are enforced under 16 USC 1375

Marine Protection, Research and Sanctuaries Act. (Ocean Dumping Act) as amended (PL 92-532; 33 USC 1401)

- Policy to protect and preserve marine habitats as designated by the Secretary of Commerce as sanctuaries. Restricts activities in sanctuaries.
- No penalties under this act; however, many acts may be punishable under RCRA at \$25,000 per day of violation.

Migratory Bird Conservation Act (PL Chpt. 257; 45 Stat 1222; 16 USC 715 *et seq.*)

- Policy to set aside lands for the conservation of migratory birds. Established the Migratory Bird Conservation Commission, which has the mandate to identify and obtain useful lands.
- No penalties are directly associated with this act.

Migratory Bird Treaty Act (PL 65-186; 16 USC 703 *et seq.*)

- Policy to prohibit the taking, possession, and trade of migratory birds, except as permitted by regulations.
- Penalties are enforced under 16 USC 707.

Migratory Game Fish Study Act of 1959 (PL 86-359; 73 Stat 642, as amended; 16 USC 760e)

- Policy to study migratory marine fish of interest to recreational fishing. Provides funding for said study.
- No penalties are directly associated with this act.

Migratory Marine Game Fish Act (PL 86-358; 73 Stat 643; 16 USC 760c-760g)

- Policy that provides funding for various studies of marine game fish.
- No penalties are directly associated with this act.

Mineral Leasing Act of 1920 (30 USC 181 *et seq.*)

- Lays out leasing and prospecting guidelines for coal, phosphate, sodium, potassium, oil, oilshale, gilsanite, and gas on federal lands.
- Penalties for fraudulent leasing: fines up to \$500,000 and/or five years imprisonment.

Multiple-Use Sustained Yield Act of 1960 (16 USC 528-531)

- Policy to manage land in concert with the goals of a multiple-use program. Provides funding to support this act.
- No penalties are directly associated with this act.

National Environmental Policy Act (NEPA) of 1969 (as amended, PL 91-190; 42 USC 4321-4347)

- Policy to require federal agencies to consider the environmental impact of actions taken. Mandates a decision-making process to achieve the goal. This act is a procedural and declarative act. For any federal action that is not a Categorical Exclusion, an Environmental Assessment must be made in order to determine if a full Environmental Impact Statement (EIS) must be prepared. The EIS must follow specific guidelines outlined in 50 CFR 1500-1508. The act does not require the federal agency to choose the least environmentally destructive alternative; only that the agency considers the environmental impact and alternatives to the action.
- No penalties are directly associated with this act.

National Historic Preservation Act (NHPA) of 1966 (as amended, PL 89-665; 16 USC 470 *et seq.*)

- Policy to protect and preserve historic and prehistoric objects, structures, sites, and districts which are included in or are eligible for inclusion in the National Register. Establishes the National Register and the Advisory Council on Historic Preservation. This act defines a decision-making process to be followed when planning an action in the vicinity of a historic area. Requires the development of mitigation plans if historic areas will be affected. Provides funding opportunities to achieve the goals of this act.
- No penalties are directly associated with this act.

National Trails System Act of 1968 (16 USC 1241-1249)

- Policy to develop a system of national trails for recreational purposes.
- Penalties are provided for users abusing rules of trails. No penalties for developers or managers of trails.

Noise Control Act of 1972 (PL 92-574, 42 USC 4905)

- Policy giving the EPA the power to regulate and enforce noise level standards for commercial sources. Includes such sources as construction, transportation, motors, and engines. However, the FAA has final authority over aircraft noise.
- Penalties - Criminal: \$25,000 per day of violation and/or up to one year imprisonment for the first offense. Fines and prison terms are doubled for second offense.

Outdoor Recreation on Federal Lands (16 USC 4601 {1})

- Policy encouraging the development of outdoor recreation activities on federal lands.
- No penalties are directly associated with this act.

Resource Conservation and Recovery Act (RCRA) including the Solid Waste Disposal Act (42 USC 6901-6992, as amended)

- Policy and regulations to reduce and limit the amount of solid wastes entering landfills. Prohibits the open dumping of solid or hazardous wastes and encourages reuse and recycling of solid wastes. Provides funding for programs and projects intended to achieve the goal of this act.
- Penalties - Criminal: Fines up to \$25,000 - \$50,000 per day of violation and/or one to two years imprisonment. Knowing Endangerment fines up to \$250,000 and/or five years imprisonment. For organizations, fines up to 1 million dollars. Civil: Fines up to \$25,000 per day of violation. Citizen Suits: A person may bring a civil suit against any person, the U.S. government, or agency which is in violation of this act, subject to minor restrictions.

Rivers and Harbors Act of 1899 (33 USC 401 *et seq.*)

- Policy to protect and maintain navigable waterways of rivers and harbors. Restricts certain activities in said areas. Penalties for wrongful deposit of refuse, injury to harbor improvements, and obstruction of navigable waters.
- Penalties - Criminal: Not less than \$300 nor more than \$2500 and/or not less than 30 days nor more than one year imprisonment.

Safe Drinking Water Act (as amended, 42 USC 300f *et seq.*)

- Policy to protect the potable water resources of the nation. Sets standards for drinking water quality and prohibits various activities in said water resources.
- Penalties - Criminal: Fines up to \$50,000 and/or five years imprisonment. Civil: Fines up to \$25,000 per day of violation. Citizen Suits: A person may bring suit against any person, U.S. government, or agency for violation of this act.

Salmon and Steelhead Conservation and Enhancement Act of 1980 (PL 96-561; 94 Stat 3275; 16 USC 3301 *et seq.*)

- Policy to enhance the renewable resource of salmon and steelhead fish and to provide the effective management thereof.
- No penalties are directly associated with this act.

Soil and Water Resources Conservation Act of 1977 (16 USC 2001-2009)

- This act requires the development of a national plan to prevent soil and water resources deterioration.
- No penalties are associated with this act.

Surface Resources Use Act of 1955 (30 USC 601, 603, 611 to 615)

- Policy regarding disposal of mineral and vegetative matter on public lands by the United States. Also deals with tide and claim issues. Expands on the Materials Act of 1947.
- No penalties are directly associated with this act.

Timber Sales on Military Lands [An update of the Military Construction Authorization Act] (10 USC 2665)

- Policy regarding the use of funds generated from timber sales on military lands.
- No penalties are directly associated with this act.

Toxic Substances Control Act (TSCA) (as amended, 15 USC 2601-2654)

- Policy to promote an understanding of effects of chemical substances and mixtures on health and the environment. Encourage research in this area, especially by manufacturers. Regulates those chemical substances and mixtures that pose an unreasonable risk of injury to health or the environment.
- Penalties - Criminal: Fines up to \$25,000 per day of violation and/or one year imprisonment. Civil: Fines up to \$25,000 per violation (each day of continued violation constitutes a separate violation). Citizen Suits: A person may bring a civil suit against any person, the U.S. government, or agency which is in violation of this act.

Water Resources Planning Act and Water Resource Councils Principles and Standards Act of 1965 (PL 89-80; 42 USC 1962 *et seq.*)

- Policy to encourage the conservation, development, and utilization of water and related land resources of the Nation.
- No penalties are directly associated with this act.

Watershed Protection and Flood Prevention Act (PL 92419; 68 Stat 666, as amended & 86 Stat 667; 16 USC 1001)

- Policy of the federal government to work with the states to prevent damages due to erosion/flood water and sediments, so as to improve the quality of the nation's land and water resources.
- No penalties are directly associated with this act.

Wild and Scenic Rivers Act of 1968 (16 USC 1271-1287)

- Policy to protect and preserve the nation's wild and scenic rivers. Sets up the National Wild and Scenic Rivers system and criteria for including rivers in the system. Prohibits licensing or federal funding for water resource projects on rivers in the system.

- No penalties are directly associated with this act.

Federal Regulations

Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (Title 36, Part 1191)

Codifies guideline requirements for buildings complying with the Americans with Disabilities Act (ADA). The guidelines are applicable to new design, construction, and alterations of all buildings required to adhere to the ADA. Guidelines are technical specifications regarding such aspects of minimum number of parking spaces, minimum hallway widths, work top levels, etc.

Curation of Federally-Owned and Administered Archaeological Collections (Title 36, CFR, Part 79)

This regulation sets forth standards, procedures and guidelines for federal agencies involved in collecting prehistoric and historic remains and artifacts recovered under the authority of the Antiquities Act, the Reservoir Salvage Act, Section 110 of the National Historic Preservation Act, or the Archaeological Resources Protection Act.

Department of the Interior Supplemental Regulations (for the Archaeological Resources Protection Act of 1979) (Title 43, CFR, Part 7.20) Reserved

- Determination of Eligibility for Inclusion in the National Register of Historic Places (Title 36, CFR, part 63)
- This regulation was developed to aid federal agencies determine the eligibility of property for inclusion in the National Register. The process is based on EO 11593 and regulations of the Advisory Council on Historic Preservation (36 CFR 800).

Endangered and Threatened Wildlife and Plants (Title 50, CFR, part 17)

This regulation was developed to implement the Endangered Species Act.

Environmental Protection and Enhancement (Title 32, CFR, Part 650)

This regulation defines policies, responsibilities, and procedures for the protection of environmental quality for the Department of the Army in peace time. Discusses water, air, solid waste, hazardous and toxic materials, noise, historic preservation, oil and hazardous substance spills, and environmental pollution prevention.

Interagency Cooperation-Endangered Species Act (Title 50, CFR, Part 402)

This regulation provides guidance for interagency cooperation in the implementation of the Endangered Species Act.

Migratory Bird Permits (Title 50, CFR, Part 21)

Establishes procedures for obtaining permits to take, possess, or transport any migratory birds or nests.

National Register of Historic Places (Title 36, CFR, Part 60)

This regulation defines the National Register of Historic Places. In addition, it sets forth procedures for inclusion of properties on the National Register and describes limitations and benefits of inclusion on the National Register.

Preservation of American Antiquities (Title 43, CFR, Part 3)

This regulation defines the jurisdiction over American antiquities located on various federal lands. Provides a process for permitting the examination, excavation, and gathering of objects of antiquity.

Protection of Archaeological Resources (Title 32, CFR, Part 229)

This regulation establishes standards and procedures for federal land managers dealing with archaeological resources on public or Indian lands in the United States.

Protection of Historic and Cultural Properties (Title 36, CFR, Part 800)

This regulation defines the “106 process” of the National Historic Preservation Act. Seeks to accommodate federal activities while maintaining the historic integrity of properties under the jurisdiction of federal agencies.

Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (Title 40, CFR, Parts 1500-1508)

Defines procedures for complying with the National Environmental Policy Act.

The Secretary of the Interior’s Standards for Historic Preservation (Title 36, CFR, Part 68)

This regulation sets forth standards for preservation requirements of any proposed grant-in-aid project funded through the National Historic Preservation Fund.

Executive Orders (EO)

Environmental Effects Abroad of Major Federal Actions (EO 12114), 4 January 1979.

Essentially extends the requirements of the National Environmental Policy Act, Marine Protection Research and Sanctuaries Act, and the Deepwater Port Act to federal actions outside the United States.

Exotic Organisms (EO 11987) 24 May 1977.

Executive agencies shall restrict the use of federal funds, programs, or authority to export native organisms to foreign lands where such species do not occur naturally.

Federal Compliance with Pollution Control Standards (EO 12088) 13 October 1978.

Places responsibility on the heads of federal agencies for compliance with federal pollution control standards.

Floodplain Management (EO 11988) 24 May 1977, as amended.

Policy enacted to avoid long and short-term negative impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development.

Intergovernmental Review of Federal Programs (EO 12372) 16 July 1982.

Provides opportunity for state and local governments to consult on federal programs to which they would contribute funding or be affected by such programs.

Prevention, Control and Abatement of Environmental Pollution at Federal Facilities (EO 11752).

Intent to ensure that the federal government, in running its facilities, provides leadership in the protection and enhancement of the quality of water, air, and land resources.

Protection and Enhancement of Environmental Quality (EO 11991).

Amends EO 11514 so as to give the Council on Environmental Quality the power to promulgate procedural regulations regarding the preparation of environmental impact statements and to resolve conflicts between agencies regarding implementation of the National/Environmental Policy Act.

Protection and Enhancement of the Cultural Environment (EO 11593) 13 May 1971.

Protection of Wetlands (EO 11990) 24 May 1977.

Directs each agency to take action to minimize the destruction, loss, or degradation of wetlands.

Use of Off-Road Vehicles on Public Lands (EO 11644), as amended by EO 11989.

Sets forth provisions for allowing the heads of executive agencies to determine the allowable usage of off-road vehicles on federal land with the goal of protecting the areas from overuse.

DEPARTMENT OF DEFENSE DIRECTIVES

Accounting for Production and Sale of Forest Products (DOD Directive 7310.5), 25 January 1988.
Updates policy, prescribes procedures, and assigns responsibilities for DOD reimbursement and for a state's entitlement to a share in net proceeds derived from forest products sold from military installations or facilities.

Archaeological and Historic Resources Management (DOD Directive 4710.1), 21 June 1984.
Directive provides policy, prescribes procedures, and assigns responsibilities for the management of archeological and historical resources located in and on waters and lands under DOD control.

Environmental Effects Abroad of Major Department of Defense Actions (DOD Directive 6050.7), 31 March 1979.
This directive provides policy for the decision-making process of considering environmental effects on actions by the DOD undertaken outside of the United States. Essentially, this directive extends the requirements of NEPA to these situations.

Environmental Effects in the United States of DOD Actions (DOD Directive 6050. I), 30 July 1979.
This directive provides policy that all DOD actions undertaken in the United States will be in compliance with the NEPA mandates.

Natural Resources Management Program (DOD Directive 4700.4), 24 January 1989.
This directive establishes policies and procedures for an integrated program of natural resources management. It stresses multiple-use strategies.

Army Regulations

Environmental Protection and Enhancement (AR 200-1), 23 May 1990.
Regulation deals with environmental protection and enhancement. This regulation covers the following topics: water, air, hazardous materials, solid and hazardous wastes, noise, oil and hazardous substances spills, environmental restoration, asbestos, radon, and other programs.

Environmental Effects of Army Actions (AR 200-2), 23 January 1989.
This regulation sets the policy for the Army to comply with NEPA. Implements the Council on Environmental Quality's regulations, EO 12114, DOD directives 6050.1 and 6050.7.

Historic Preservation (AR 420-40), 15 May 1984.
This regulation provides procedures and responsibilities for the treatment of historic and archeological properties, sites, objects, districts, etc. on Army land. Also provides instructions on locating and treating historic properties in accordance with NHPA. Establishes a method of creating a Historic Preservation Plan.

Museums and Historical Artifacts (AR 870-20), 9 February 1987.
This regulation intends to improve the quality and professionalism of Army museums and the preservation of items contained in Army museums.

Natural Resources — Land, Forest, and Wildlife Management (AR 200-3), 28 February 1995.
This regulation sets the policy and procedures for management of natural resources to ensure the support of the military mission and to ensure conservation, restoration, and appropriate use of renewable resources.